



**Governor's STEM Advisory Council
Regional STEM Network Hub
Application**

April 6, 2012

Northeast Region

Hawkeye Community College

Name of proposed requesting entity (or entries as partners):

Hawkeye Community College

Name and title of primary contact:

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Region:

Northeast

Proposed Location:

Hawkeye Community College main campus, Buchanan building. Hawkeye Community College (HCC), an open-door, two-year public institution located in Waterloo, Iowa, serves a diverse student body in a ten-county area of northeast Iowa. This area is designated as Merged Area VII which includes all or a part of Benton, Black Hawk, Bremer, Buchanan, Butler, Chickasaw, Fayette, Floyd, Grundy, and Tama counties. Its service centers include the main campus in Waterloo and eight additional locations within a 35-mile radius.

Hawkeye Community College offers: more than 50 one-year and two-year credit bearing programs; business and community education classes; specialized training geared toward business and industry; classes for high school students during their junior and senior years, allowing them to earn college credits while still in high school; and instruction for individuals needing General Educational Development (GED), Adult Basic Education (ABE), and/or English Language Learning (ELL) classes. HCC has graduated nearly 40,000 credit students since July 1, 1966 in technical and arts and sciences transfer programs.

Identify Your Mission:

The mission of Hawkeye Community College is a globally informed community of successful lifelong learners.

Vision: Hawkeye Community College will be recognized for educational excellence, exceptional student services, and responsiveness to diverse communities.

Institutional Goals:

To effectively demonstrate our mission, we are committed to provide:

- Educational opportunities that are student centered, comprehensive, and responsive to the individual and society.

- Leadership activities that support a dynamic framework for students, faculty, staff and the community to reach their potential.
- Quality services to each qualified individual.
- Access sensitivity to diversity, support for equal opportunities for all qualified individuals.
- Cooperative community relationships which foster human, social, cultural, economic, and civic development.

Identify Support:

Office supplied with computer, furniture, and supplies. Access to HCC network and email. Fifty percent of cost of STEM advocate. Costs of advertising for and hiring of STEM Hub advocate. Cost of mileage and vehicle use will be supported by college funds. CTE-related expenses may be covered by Perkins funds, as available. HCC grant department continually seeks grant opportunities in the STEM area and would pursue grant assistance for STEM Hub functions. HCC is currently involved in a Department of Labor grant (active through December 2012) and may be able to draw on these resources.

Participating Organizations:

AEA267, University of Northern Iowa, Cedar Valley Chamber of Commerce, Waterloo Community School district parent and student representatives, John Deere representative, Wartburg College, Cedar Valley legislative partner, Waterloo public library representative, Cedar Falls school Board member, Cedar Valley Workforce development representative. Hawkeye community College is viewed in a positive light by the community it serves. The college has positive working relationships with the listed organizations at various levels across the college. The college has physical meeting room space and capabilities to host meetings to support the STEM Hub.

Funding Assistance:

The HCC grant department is currently pursuing STEM funding on a continual basis. The STEM Hub would be included in applications for funding opportunities. The STEM Network HUB will allow us to expand STEM activities to the schools in our service area. STEM advocate would be supervised by Vice President of Academic Affairs at the HCC STEM Hub.

Additional Information:

13. Additional information: (1) For three years, Hawkeye Community College has hosted one of the largest STEM events in Iowa - The STEM Career Fair - serving more than 1,400 8th graders each fall. This event is held through a partnership with Target Distribution (located in Cedar Falls, IA), and offers local students the opportunity to explore hands-on STEM activities in the areas of bioscience, technology, engineering and skilled trades, before writing their "I Have A Plan" career map required by their districts. (2) Hawkeye Community College is represented on the national Career Technical Education Equity Council which works to provide STEM opportunities to underrepresented populations. This organization works closely with the NAPE Stem Equity Pipeline (another national organization) to ensure that schools, community organizations and businesses partner to offer experiences for young women and cultural minorities to explore STEM careers. (3) Each year, Hawkeye Community College hosts 50-90 8th grade students in our FREE Gateway Academy Camps to expose young people to engineering and manufacturing activities as part of the national Project Lead the Way—Gateway to Technology curriculum. Students are offered hands-on activities, free meals, and leadership experience to develop a greater interest in STEM fields. As a regional leader in skilled-trades education and healthcare training, Hawkeye Community College works continuously with local economic development groups, non-profit organizations, staffing agencies, and all of our K-12 school districts to ensure that the public is aware of the current and future employee demand in STEM-related industries. We have mission-based events in

place to continually attract new visitors to our campus and to keep new faces in the pipeline for these important careers. (4) HCC is involved in STEM-related activities in three academic schools. The School of Math, Natural and Social Science is involved in the IMSEP through the I-Teach program. This program is designed to increase the number of education students who will enter the field of science and math teaching. The school is also a partner with Iowa State University in a grant from the NSF (LSAMP) to increase the number of underrepresented students on math and science. Math and biology faculty members are currently involved in early work on a NSF STEP grant application partnering with UNI and Ellsworth community college. This grant would also involve increasing the number of students entering math and science majors in the 3 colleges. The school has also partnered with the School of Health Sciences to acquire BodyViz software for use in anatomy and physiology courses as well as health-related program courses.

The School of Health Sciences has undergone a significant remodeling to provide cutting edge experiences for their students. The most significant addition is the installation of a Virtual Hospital (VH). The VH contains high fidelity simulations including newborn, birthing mother, a junior, 4 adults, a code 'kelly' (cardiac procedure), and 2 i-v arm simulators. Additionally, there are 5 low fidelity simulators for use in nursing labs that allow practice with basic assessment techniques, wound management and catheterization. The dental clinic is enhanced with the addition of cameras to allow for live demonstrations, visible at each clinic station and saved on streaming technology. Major simulators have a camera attached to them so that instructional activities can be sent to lecture rooms over IP. The Bridges2Healthcare grant enhances the ability of health sciences to have additional lab facilities for students, and retention specialist. The infusion of virtual hospital concept in all the health sciences program areas intensifies the robust nature of the curricula. This causes the faculty to change how they teach in the curricula to meet the industry demands. Also included in our inventory of resources is an electronic record simulation.

The School of Applied Technologies and Engineering Technologies is undergoing re-modeling with the addition of an advanced manufacturing center. Hawkeye Community College's Advanced Manufacturing programs continue to support the Cedar Valley employment and training needs with certificate, diploma and degree programs. The Area 7 EMC2 is one of the best industry-supported high school-to-community college programs in the state.

The HCC Career Center is also a resource that can provide access to STEM-related careers in the Northeast STEM Hub region.

Subject Matter Expertise:

HCC is a leader in advanced manufacturing and related programs. Unique faculty expertise is found in technology, advanced manufacturing, and science programs/disciplines. HCC is a leader in advanced manufacturing and related programs. Unique faculty expertise is CNC & Tooling Program that offers a modern well-equipped state-of-the-art training facility utilizing industry level CNC mills and lathes along with brand new wire EDM CNC equipment.

Additional Considerations:

The physical location of HCC places it in a central location in the defined Northeast region. This would allow the STEM Hub to truly be a hub in the region. The HCC STEM Hub would be reasonably accessible to community members in the region, community school districts, other community colleges in the region, the University of Northern Iowa staff, and any other entities drawing on the resources of the HUB.

